in other allied conditions, namely, rest, position, and pressure, and the avoidance of all measures which would increase it. Passive motion, especially if pushed to the point of pain, violates that principle. In its more marked form, if pushed with or without anæsthesia to the point of rupturing newly formed cicatrices, it simply inflicts another traumatism-laceration and hemorrhage—which in turn requires rest for its relief. The patient has then to recover not only from his original trauma but also from the second one which he owes to us. The reaction instead of being diminished is augmented, and the cicatricial thickening and production are added to. The natural evolution of such new tissue is toward its gradual disappearance in great part, and we may confidently expect that natural processes will reduce the disability to a minimum which will be determined by the character of the primary injury and which we, in the great majority of cases, are powerless to make smaller and can only hasten somewhat by such mild measures as pressure, massage, and encouragement in natural use. Ankylophobia is a disease of the surgeon, but it is his patient who suffers its ill effects.

In this brief statement, so brief as to be hardly more than a syllabus of the subjects elaboration seemed to be almost so unnecessary as to be objectionable. The ideas are familiar to most of us. The need is to keep them in mind.

II.

TECHNIQUE OF THE NEWER OPERATIONS FOR SHORTENING THE ROUND LIGAMENTS AND THE URETEROSACRAL LIGAMENTS FOR THE CORRECTION OF BACKWARD DISPLACEMENT OF THE UTERUS.

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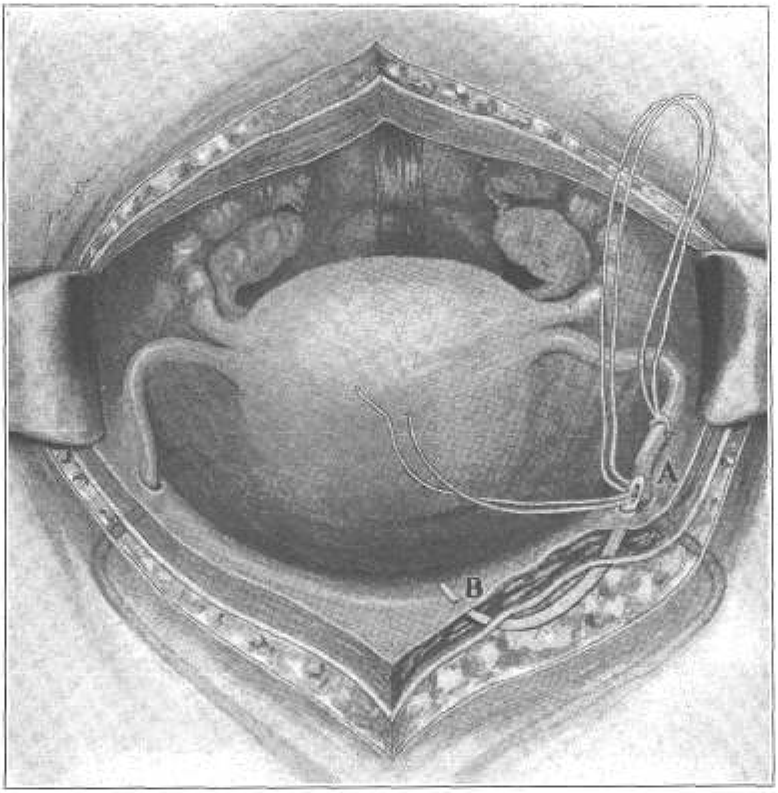
The purpose of this communication is not to announce a new principle in connection with the operative handling of the round and ureterosacral ligaments, for that has been done in the work of Dolores, Amman, Jr., Beck, Gilliam, Barret, Bovée and many others. The purpose is to set forth certain modifications in technique which I have found useful in shortening the ligaments for backward displacement of the uterus.

SHORTENING THE ROUND LIGAMENTS.

Alexander's operation and other operations for shortening the round ligaments whether by means of incision into each inguinal canal or through the inguinal region on either side into the pelvic cavity have in great measure and for good reason given way in later years to more practical procedures in which the ligaments are treated intraperitoneally through a median laparotomy incision. The vaginal hysteropexies and the ordinary operations of abdominal

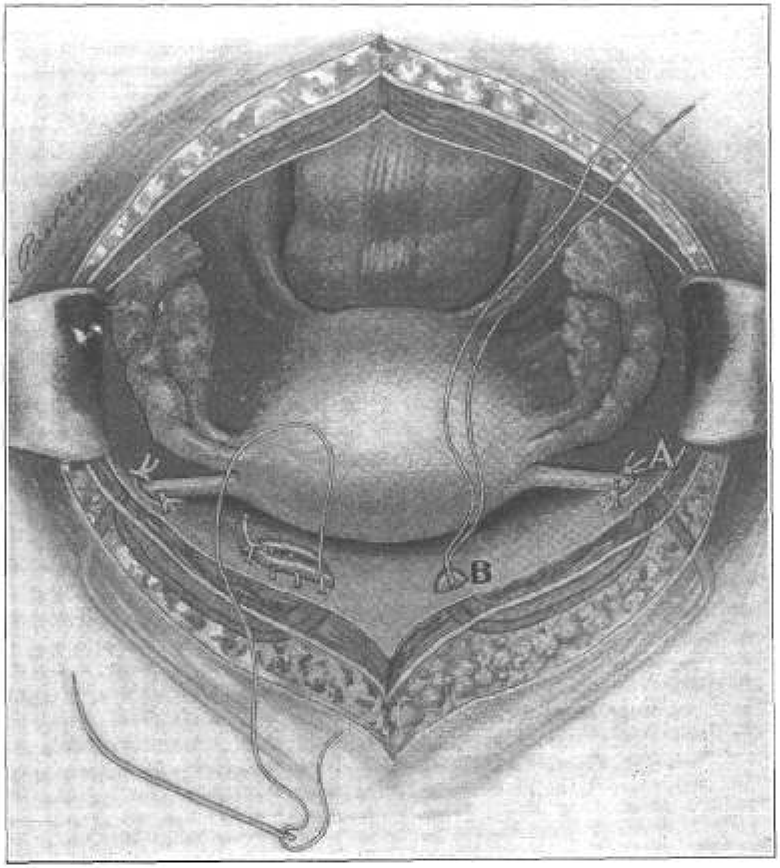
Fig. 1



The abdomen is opened in the median line just above the pubes and the wound is held widely apart by retractors so as to expose the pelvic contents. The middle of the relaxed round ligament is seized with forceps and tied with a catgut suture at a point just above *A*. The two free ends of this suture are then threaded on a curved blunt-pointed needle the size of a goose quill and this needle is then thrust through peritoneum at the internal abdominal ring, traction on the ligament having been made in order to locate the ring at point *A*. The needle is then passed on through the rectus muscle and fascia and then turned and forced through fascia, muscle, and peritoneum to its point of exit close to the bladder reflexion about one-half inch from the peritoneal margin of the abdominal incision at point *B*. The blunt needle is then removed and the loop of ligament is drawn through the artificial inguinal canal by means of the suture from *A* to *B*, as shown on the right side of Fig. 2. The artificial canal lies between points *A* and *B*. In order to avoid wounding the deep epigastric and other vessels the needle should be blunt pointed and the plunge of it should not be too deep into the region of the internal ring. The needle should be about two and one-half inches long and flattened both on its convex and concave sides in order that it may be held firmly in the needle forceps, and with a point especially blunt to make it pass by bloodvessels without wounding them, but not so blunt as to prevent introduction.

fixation also are becoming obsolete. The suspension operation of Kelly, however, by which the upper part of the posterior wall of the corpus uteri is attached to the anterior abdominal wall near the bladder, should not be set aside without some reservation. At least, after a very extensive experience with this operation, I have not observed in my own cases the injurious mechanical results which others have attributed to it. Possibly these injurious results have followed fixation, an operation always to be condemned, rather than the suspension advocated by Kelly. At any rate the two operations have been much confused with one another. Suspension

FIG. 2

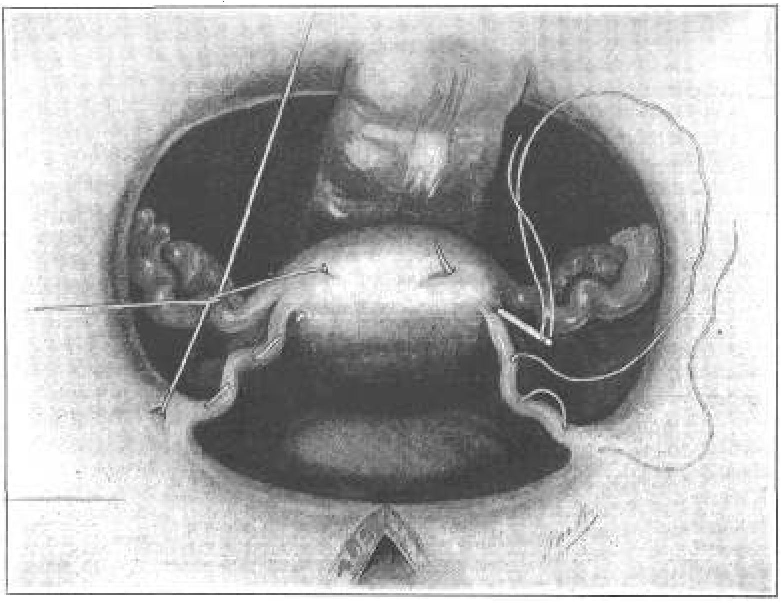


Continuation of Fig. 1. The ligament having been drawn through the artificial inguinal canal is then stitched with catgut at its point of entrance at *A* and the loop in a similar manner is stitched down on the peritoneum at the point of exit *B*. The left side of the figure shows the ligament thus stitched at the point of entrance and being stitched at its point of exit. This having been done on both sides completes the shortening. The abdominal wound is then closed.

for the most part is free from the objections which properly have been urged against fixation, but even better than suspension is the newer operation of shortening the round ligaments, because while being quite as effective it is less objectionable from the mechanical, anatomical, and symptomatic points of view.

In the excellent operation of Gilliam and the improvements on it recently introduced by Barrett and others the round ligaments are drawn through an artificial canal into the laparotomy wound and fastened there either to one another or to the corresponding sides of the wound, so that this wound when closed shall contain the loops of the ligaments thus drawn into it.

Fig. 3

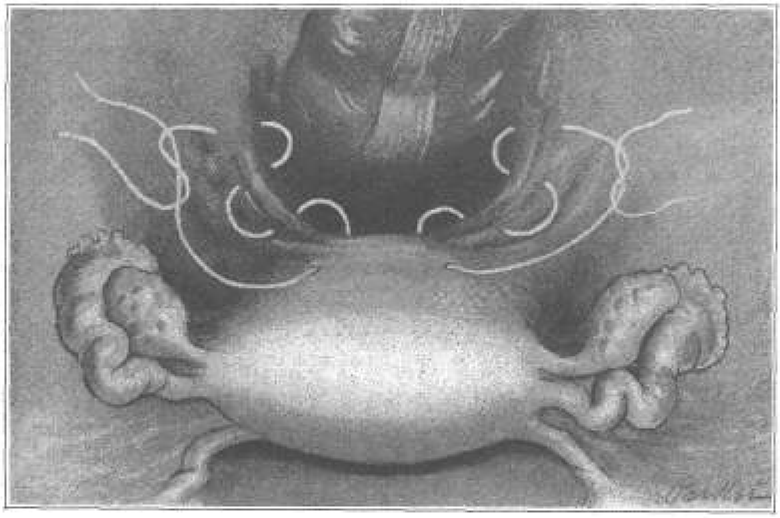


Traction being made on the ligament in order to locate its point of entrance at the internal inguinal ring. An ordinary needle is introduced at this point and the round ligament and the adjacent part of the broad ligament are caught up from point to point until the suture finally is brought out in uterine tissue near the uterine end of the round ligament. The tying of the suture which should not be drawn too tightly shortens and strengthens the ligament by crumpling it on itself. If the ligament is absent or highly attenuated the structures of the broad ligament between the horn of the uterus and the internal ring may be brought together by a similar suture with similar result. Before tying the sutures the surfaces to be united should be scarified in order to secure strong union.

The method is satisfactory provided there is no subsequent suppuration in the abdominal wound, but it should be a fair *a priori* conclusion that if the wound becomes infected the infection would be apt to extend through the tracks of the ligaments into the peritoneal cavity and, to say nothing of unnecessary spreading of infection, might at least defeat the purpose of the operation. The danger of such a source of infection is obviated by the modified technique about to be described. This technique has for its object the making of an artificial inguinal canal on each side through which a loop of the round ligament is drawn and anchored, not in the abdominal wound but on the peritoneal surface at a point a little distant from and independent of the wound. Figs. 1 and 2 will serve to illustrate the method.

It will be observed that the uterus which appears retroverted in Fig. 1 takes its anteverted position in Fig. 2.

FIG. 4



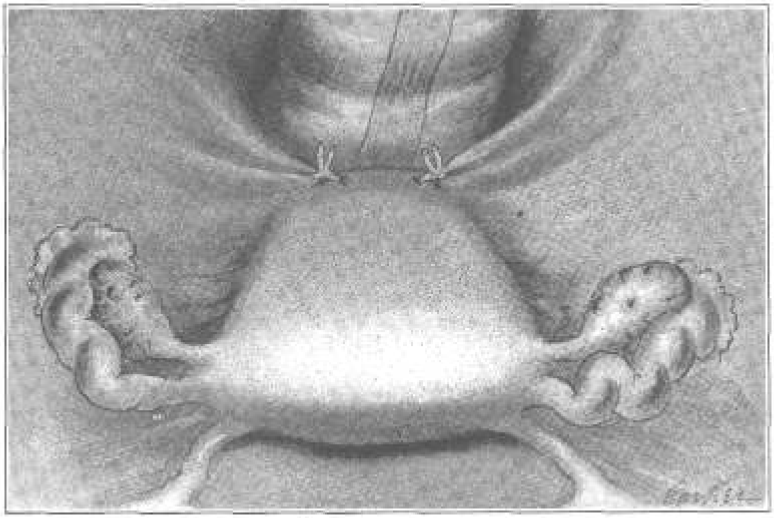
The uterosacral ligaments are exposed and a purse-string suture is introduced for the purpose of shortening them and partially tied but not drawn taut. Before tightening the sutures the surfaces to be united should be scarified in order to ensure firm union of the peritoneal surfaces. In order to avoid wounding important nerves and vessels the suture should be passed superficially.

In some cases the ligament on one or both sides will be found to be absent or so attenuated as to give little hope even though shortened of being adequate to sustain a heavy uterus. It may then be well to substitute for the above operation the procedure shown in Fig. 3, which is to crumple the rudimentary ligament upon itself by means of a purse-string catgut suture running from the internal inguinal ring to the uterus.

SHORTENING THE UTEROSACRAL LIGAMENTS.

Any operation for shortening or strengthening the round ligaments may fail to give satisfactory results if the uterosacral ligaments are so relaxed that they cannot perform their function of holding the cervix uteri in its normal location back in the hollow of the sacrum. It may be necessary, therefore, that these ligaments be shortened also. Figs. 4 and 5 illustrate the operation usually performed for this purpose, and show the change which the shortening makes in the location of the cervix uteri. Reference here is made to shortening the ligaments only through an abdominal incision. A very exhaustive paper on the shortening, both vaginal and abdominal, of the uterosacral ligaments, with bibliography, by J. Wesley Bovée may be found in the *Transactions of the American Gynecological Society*, 1902.

FIG. 5



Continuation of Fig. 4. The catgut sutures shown in Fig. 4 are now drawn taut and tied. These sutures having been tied usually should be fortified by an additional suture through the crumpled ligament on each side. *This figure shows the cervix uteri drawn well back into its normal location so near the hollow of the sacrum that the corpus cannot have room to fall back into its former retroverted position.*

It is perhaps needless to add that the success of the operations above described may demand thorough repair of a lacerated perineum, or more comprehensively speaking, may require adequate operative work upon a relaxed vaginal outlet and sometimes even upon a relaxed vagina.